



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,763	08/30/2001	David J. Corisis	3388.6US (97-560 . 5)	2592
24247	7590	06/02/2004	EXAMINER	
TRASK BRITT			MITCHELL, JAMES M	
P.O. BOX 2550			ART UNIT	PAPER NUMBER
SALT LAKE CITY, UT 84110			2827	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,763

Applicant(s)

CORISIS, DAVID J.

Examiner

James M. Mitchell

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ball et al. (U.S. 6,299,049).

Ball (Fig 1B, Abstract; cl. 16) discloses an assembly method for a semiconductor device assembly using a wire bonding device having an upper clamp member and a lower clamp member, said method comprising: forming a strip of lead frames (cl 16 of Ball), said strip having opposed rails (horizontal portion of frame, 16), having dam bars (vertical portion of frame, 16) between said opposed rails, having at least two inner leads (long, 26) located at a first level, having at least two outer leads located at a second level (same as first/ alternatively at a different horizontal surface area and therefore a different level), having a die mount paddle (layer underneath chip, 20) located at a third level (same as first; alternatively at a different horizontal surface area and therefore a different level) and having at least one integral clamping tab (portion of frame connecting pad to dam bars), said at least one integral clamping tab located at a fourth level (same as first; alternatively at a different horizontal surface area and

Art Unit: 2827

therefore a different level) extending outwardly for contact by said upper clamp member; attaching a semiconductor device to said die mount paddle, said semiconductor device having a plurality of bond pads (not labeled); aligning said strip of lead frames (Fig 1B) on said lower clamp member ("heat block"; Abstract; not shown) of said wire bonding device having said upper clamp member (24) overlying portions of said at least two inner leads and portions of said at least one integral clamping tab; and attaching at least two bond wires (not labeled) to said plurality of bond pads of said semiconductor device and said portions of said at least two inner leads

Ball further discloses removing said strip of lead frames (wire other leads with clamp device) and said semiconductor device from said lower clamp member, but does not explicitly show encapsulating a portion of said strip of lead frames, said semiconductor device, and said at least two bond wires extending between said strip of lead frames and said semiconductor device in a material.

Examiner takes official notice that encapsulation techniques were well known at the time the invention was made and that it would have been obvious to one of ordinary skill in the art to encapsulate a portion of said strip of lead frames, said semiconductor device in order to provide protection for the device.

Allowable Subject Matter

Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2827

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or make obvious forming said die mount paddle having an upper surface thereof at a third level located below an upper first level of said at least two inner leads, and deforming said at least one integral clamping tab to clamp portions thereof including all the limitations of the independent claim.

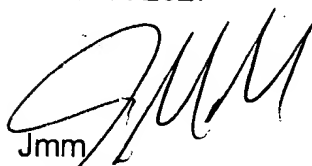
Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 10:30-8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2827


Jmm
May 26, 2004


KAMAND CONEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800